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LEADING ARTICLES

PELLAGRA, WITH REPORT OF CASES.

BRUCE ALLISON, M. D., AND WILMER ALLISON, M. D.

FT. WORTH, TEXAS

Physicians in charge of the Arlington Heights Sanitarium.

Pellagra, the new (?) disease, or Lombardian leprosy first made its appearance in Spain in 1735. Since that time it has been found scattered, more or less, throughout Europe, and exists to an alarming extent, in some parts, especially in Italy.

Osler, in his 1905 edition, states that it has not been observed in the United States, and Pusey, in his 1907 edition, states that it is unknown in America. There were two or three isolated cases reported in this country prior to 1906, but the first serious notice given to it in this country was in 1906 when it was found to exist in the Georgia State Sanitarium. In April, 1907, Searcy reported its existence in the Alabama asylum, stating that the cases had been observed since 1901, but their true nature had not been recognized until the time of his investigations. Since this report the disease appears to have become epidemic throughout the Southern States. Something more than two thousand cases being supposed to exist.

The prevalence of this new disease has become so widespread as to alarm the public and it is quite common to see exaggerated reports in the newspapers which tend to over-alarm the laity. The last issue of McClure's magazine has in it a very strong and possibly overdrawn article as to the horrors of the disease. Recently the superintendent of the asylum in San Antonio reported two cases in that institution and the papers immediately came out with big head lines telling of the terrible scourge that threatened the land. Such reports are to say the least discouraging to those who would report their cases for the benefit of the profession, but will probably continue as long as the asylums do not contain all those unfortunate individuals who are deficient in judgment.

Etiology.—Practically all authors seem to agree that there are two main factors, namely, diseased corn and the influence of the actinic rays of the sun Of the other causes given we have unhygienic surroundings, poor ventilation, over-crowding in the various asylums and improper food. In Italy it is closely associated with poverty.

Of the different views as to its cause we have the autointoxication theory, the infection theory, the starvation theory, as well as the protozoan theory.

On account of its resemblance to the protozoan diseases it has been suggested that it is probably of this nature.

Some have even gone so far as to suggest the possibility of the poisons lying alcohol distilled from bad maize.

The occurrence of the hook-worm has been reported in a good many cases. The disease has become so prevalent in Italy that the government has passed laws regulating the use and storing of corn, and institutions have been established for the care of the pellagrous patients. It is claimed that these methods have brought a reduction in the number of cases, but Sambon, in 1905, said that pellagra was not decreasing but increasing. Walker of Georgia states that corn does not appear to be a causative factor in his cases.

Various writers have gone very thoroughly into the different kinds of foods made from corn and the theories as to why it is more prevalent in a certain country at a certain time and not present in some other part where corn is also extensively used have become very numerous, but after all there still remains a doubt as to the real cause.

Lombroso has experimentally produced the pellagrous symptoms in both man and

animals by giving the toxins of diseased corn, but he has also failed to produce the symptoms in others.

In Italy the disease seems to prefer the poorer classes who live principally on "polenta" but in this country it has been no respecter of persons. And we have seen cases who claimed to have never eaten any of the corn foods for years and some who never ate them.

Various bacteria have been announced as bearing some relation to the disease, but the other observers could not agree.

Pathology.—That given by most writers is an inflammatory condition of the alimentary tract, fatty degeneration of the liver, and cord lesions in the nature of a leptomeningitis, often with much thickening; a pigmentation and atrophy of the anterior cornual cells and a posterior sclerosis usually affecting the collums of Gall and Burdach. We have been unable to obtain autopsies in our cases.

Symptoms.—Most writers recognize prodromal symptoms extending over an indefinite period from a few days to a few months, most of which are neurasthenic in nature, such as headache, backache, nervousness and loss of appetite with disturbance of the bowels. Occasionally there are indefinite mental symptoms. Some cases appear to come on fairly suddenly and develop rapidly, while others run a more chronic and intermittent course with acute exacerbations. It is usually spoken of as being an afebrile disease, but in many cases fever has been reported ranging from 99 deg. F. to 102 deg. F., and one stage is occasionally seen that is known as "typhoid pellagra" in which the patient is prostrated with high fever and symptoms simulating typhoid fever.

The three most characteristic symptoms met are an intractable diarrhea some time in its course, a symmetrical dermatitis and mental symptoms of a depressed or excited nature. Some cases have been reported without the dermatitis, but it probably occurs in all cases if they are observed long enough. Paralytic and ataxic symptoms are also noted in many of the cases.

Gordon says that in ergotism the symptoms are more of a tabetic nature, while in pellagra they are more of the type of spastic paraplegia.

Peterson states that the ataxia is most marked in the upper extremities and spasticity more pronounced in the lower limbs. He also says that the eye reflexes are spared and sensation is not affected.

Most writers on the subject state that in the final stage a melancholic depression is the most prominent of the mental symptoms.

There occurs in all cases a stomatitis of more or less severity. Some speak especially of the red inflamed spongy gums with a heavily furred tongue and increased salivation; while others refer to a tongue that is slick and red and deprived of its coat. Whitish ulcers have been seen in some cases.

The disease is supposed to come on early in the spring, but a number of cases have been reported as occurring during almost every month in the year.

The skin lesions from which the disease derives its name may appear suddenly and resembles sunburn on the back of the hands. The hyperemia soon becomes marked and the skin cracks open with more or less hemorrhage. Some cases present bullae. In the majority of cases the skin has a very dry appearance. This dermatitis is also seen about the face and neck and elbow and even on the dorsum of the feet. In some cases the eruption disappears only to reappear next spring.

The reflexes vary, being increased in some and decreased in others. In our own cases the tendon reflexes were increased while the eye reflexes were undisturbed.

The diarrhea characteristic of all cases is usually described as being absolutely uncontrollable, medicines having no effect. It may suddenly cease of itself and be followed by constipation, or may be preceded by constipation.

Vaginitis is mentioned, but occurred in only one or two of our cases in a mild way.

Bedsores may develop in the later stages.

Prognosis.—This is very grave. The average duration is said to be about five years, though in mild cases the disease may reappear from year to year for ten, or even twenty-five years as has been the case in Italy.

Most of the cases seen in this country have run a very short course with a very high mortality, something like 60 to 70%, while in Europe the mortality is much lower. Many cases have been reported as cured, but few of them were in this country.

It is said that when once the patient has become insane recovery is almost unknown.

Treatment.—There seems to be no reliable treatment. Regulation of the diet, withdrawal of corn products, fresh air and hygienic surroundings with various tonics is about all the treatment that is given. Arsenic is spoken of very highly by some.

Cole of Alabama reported a case cured by one transfusion from a previously recovered case.

A case has also been reported cured by the internal administration of hydrogen peroxid.

Thayer of Baltimore reports a case in which the thyroid extract produced an immediate and remarkable amelioration of the symptoms, and he suggests that possibly there is a hypothyroidism in these cases.

Lombroso condemns the use of iron, but regards arsenic as the best drug.

REPORT OF CASES.

Since April, 1907, the diagnosis of pellagra has been made in nine cases at the Arlington Heights Sanitarium. The first of these cases were not recognized until Dr. Searcy's report was published in the Journal A. M. A. All of them proved fatal except one who is now in the asylum on account of her mental condition.

Case 4.—Mrs. A. E. S., female; white; married; age about 40; admitted in June, 1908, and died the following October. Family history negative. Previous History.—For several years patient had been treated for various troubles, mainly for gastrointestinal disturbances and mental depression.

At the time of her admission patient was thin and weak, her stomach was very irritable, and she frequently suffered from uncontrollable vomiting. Her bowels were very loose and the discharges were very foul and contained a great deal of mucus and blood at times. No parasites other than bacteria could be found in the stools. The diarrhea later on improved and later became worse again. There was a characteristic brownish cracked open scaly dermatitis on the back of the hands extending half way up the arms and both elbows also showed the eruption. Later on it appeared also on the forehead and front part of the neck. Before death under the use of ichthyol ointment the eruption had almost disappeared. Her mental condition was that of marked depression and at no time did she admit that she was better, or that she was going to get well. At one time there was a tendency to suicide. There was marked stomatitis, the tongue being at first badly coated and somewhat swollen, later on she presented the slick bald red tongue. Following the attacks of vomiting she frequently fainted.

Treatment consisted of hygienic measures, baths and the administration of tonics, especially iron and arsenic. Cerium oxalate proved effective in stopping the vomiting. The temperature of this patient ran as high as 102 deg. F. at one time.

Case 7.—Mrs. E. W., female; white; married; age about 45; admitted March, 1909. Died May,1909. Family history negative.

Previous History.—The year before her health had broken down she became nervous and restless, but got some better after being away from home a few weeks. Some two or three weeks before being admitted it was noticed that her mental condition was growing worse. She was cross and irritable and at times seemed to neglect her husband and children.

When admitted she was thin, complexion unusually brown, bowels regular, tongue slick and red. Her mental condition was fairly good and she appreciated her surroundings and condition. A little later she developed spells of excitement which would come on very suddenly and seemed to be associated with hallucinations of sight and hearing. She would jump up screaming and running, saying that something was after her, and it would be several minutes before she could be quieted. Following these spells she did not seem to recognize any one about her, called us all by different names and talked incoherently. In a few hours, especially in the afternoon, for these spells usually came in the morning, she would be herself again. After a few weeks her mental condition became much better, but about this time it was noticed that on the back of the hands and about the mouth and front part of the neck a reddish brown discoloration had appeared. In a few days the skin was cracked open and small hemorrhages were noticed. There were no blebs. At about the same time she developed a diarrhea which it was absolutely impossible to check. Practically all the known remedies were administered in various ways, but no results were obtained. Several times she was placed on a milk diet, but each time this seemed to aggravate the diarrhea, and she did best when all milk was withdrawn from the diet. The bowel movements were quite frequent, there being ten to twenty per day, containing mucus and blood. Microscopical examination failed to reveal any parasite or their ova. She frequently complained of headaches and pains in the joints and toward the end she became very much depressed. During the presence of her skin lesions and diarrhea there was fever which however did not range higher than 103 deg. F. Tendon reflexs were increased. Pupils showed nothing more than dilatation and irregularity at times.

Case 8.—Mrs. S., female; white; married; age about 40. Family history negative.

Previous History.—For several years her health had been intermittently bad and she had gone to various places and resorts seeking relief. At no time, however, were any of her symptoms alarming. There was no skin eruption or diarrhea, but she was said to be nervous. At the time of her admission she was well nourished; had a temperature of 101 deg. F., and recognized the different members of her family. Her tongue was heavily coated and the gums were somewhat spongy and inflamed. There was profuse salivation of a mucopurulent character. The family physician stated

Case of Dr. John T. Moore, Houston, Tex.

that she had at that time a diarrhea which he had been unable to check, but after her admission she was not bothered with this symptom, but on the contrary, there was a tendency to constipaion. There was also present the characteristic eruption on the back of the hands to a mild degree. This later almost entirely disappeared but the hands remained rough and scaly. Later on the presence of comodomes became very marked about the chin and mouth and to a slight extent about the neck giving a rough brownish appearance to the skin, which has been mentioned in other cases.

During the first few days she would occasionally ask for something or make a remark that could be understood, but her mental condition soon grew worse, and she became very noisy, screaming for hours at a time. She refused to eat and had to be fed with the tube. A few ulcers also appear later on in the mouth, a bed sore developed over the sacrum and the left leg became edematous. Tendon reflexes were increased. No changes were noticed in the eyes. Fecal and urine and blood examinations showed no marked changes, though no blood count was made. Most of the time the mouth was held open in a manner similar to that seen in bulbar paralysis. The legs were somewhat stiff. The temperature ran high and the last few days before death it went as high as 107 deg. F. several times. She died in coma, as did all the other cases.

The family declares that she did not eat any of the corn products at any time.

Case 9.—Mrs. D., female; white; age about 40. Family history negative.

Previous History.—Has been sick every summer for the last four or five years with gastrointestinal symptoms, such as nausea and diarrhea as well as mental depression which she had for the last two years. She had also had hallucinations of sight and hearing. With each attack she became worse until August, 1909, when she came to the sanitarium on account of her mental symptoms.

On admission she was very weak and confined to her bed. She did not sleep well, would not eat and passed her urine and feces involuntarily. She was very nervous and excitable, the least noise causing her to jump and become excited. She breathed through her mouth most of the time and could not talk so she could be understood. Her mouth was inflamed and her tongue was heavily coated and red at the edges. The first day her bowels moved twice, but were very loose and very foul. The first day she would take no nourishment, but after that she ate freely of egg albumen and broths from a spoon. She could not sit up and had practically no use of her limbs, although at times she would catch hold of the nurse when she was frightened and hold on tightly. The second day she had a temperature of 102 deg. F., and her bowels continued loose, but showed no blood. On the third morning she seemed much better and could say a few words, but that evening her temperature went to 104 deg. F. It was easily reduced by cold sponging. She continued to take her nourishment, but did not seem to gain any strength, and gradually grew

worse until death. She had the characteristic dermatitis on the back of the hands and to a slight extent about the chin and lips. Microscopically nothing of note was found in the blood or stools except a few red cells were found in the feces. Her reflexes were increased and she died in coma.

One of the writers (W.L.A.) saw in consultation recently a case in a weak minded girl about 12 years old. She gave the history of having had trouble of something like that present for several years, but never so bad as now. All over the extensor surfaces there was a marked sunburn eruption which was scaly and broken down in many places with pus forming. This was the case on the hands, arms, legs, shoulders and back. At places the eruption could be seen to have healed while it seemed to extend in other places. There was very little fever and but few other symptoms. The case has since almost recovered under the use of arsenic and iron.

From the cases we have seen and the reports which we have read we are inclined to believe that the disease as it occurs here in the South is of a more acute nature than that seen in Italy. Our cases have all been in women and so have most of those seen in this country, while in Italy it occurs more equally in both sexes.

Some of our cases ran a rather high temperature and were accompanied by a marked delirium with hallucinations of sight and hearing. In other words, they were of the typhoid type as have been a large number of the cases reported in this country.

There was no swelling of the pellagrous areas in our cases and blebs were noticed in only two.

We did not make blood counts but examined the blood stained and we could find no parasites. There appeared to be an anemic condition which was not marked. From the other reports we believe there is nothing characteristic about the anemia.

Hook worms were not found, though we looked for them. Nor was there any eosinophilia.

We were unable to secure autopsies in any of the cases and cannot speak from our knowledge as to the pathological findings. Right here I would suggest that the people of the South are too much opposed to autopsies, which is probably due to the fact that we as physicians do not try to get them often, and do not impress on the laity the necessity of having a post-mortem section to better fit ourselves for the care of other cases. There should be an autopsy in every case of death. Then we will learn medicine and be in a position to diagnose our cases and cure them.

Practically all the cases with the exception of one or two ate the various corn products and were exposed to the sun at times.

It seems that we are just in the beginning of a well marked epidemic, not only in the South, but in Texas as well, and one which bids fair to become a serious factor before long. Many new cases are being reported and the death rate does not seem to be decreasing.

The disease does not seem to be contagious, and if not due to the use of diseased corn may become very widespread before its method of transmission is determined.

It has been suggested that the recent popular use of the various corn products, as breakfast foods may in a measure be responsible for the present outbreak. It is also possible that its presence in this country at this time may be due to the fact that in certain sections the corn crop has been so meager that farmers have been compelled to use and market a very inferior grade. However the insane seem to be predisposed to the disease, and it is not as prevalent as we would expect to find it if it were due to bad corn alone.

It is strange, if this disease is due to diseased corn, that it should have been so long unknown in those countries where corn was first used.

It is also not a little strange that the toxines which produce the disease, if from corn, should remain in the body so long after its use has been discontinued and still cause the symptoms to be repeated from year to year.

This theory as to its cause seems to us to have been too blindly accepted and we are inclined to look with favor on the protozoan theory. Then too the pellagra appearing here at this time may not in all instances be the same disease as that which occurs in Italy.

There are also occurring a number of cases which have some of the symptoms, but in a much milder form. For instance, we now have a woman who is much depressed mentally but who has had no diarrhea. However she has recently developed a scaliness and redness on the back of the hands extending up the arm.

We also have a male patient who is very depressed mentally, but who is always constipated. For some time he has had a reddish scaly dermatitis on the back of both hands.

Also a case of senile dementia developed quite marked symmetrical dermatitis on the

back of the hands which closely resembled the cases of true pellagra, but which has healed without further symptoms.

Can it be that these are mild cases of true pellagra and will develop again next spring? If so there is even now an enormous number of pellagrins in Texas.

There is much to be learned about the disease and it is possible that we are dealing with more than one disease and we should have more autopsies to help clear up the pathology and its causes.

Before closing we desire to express our thanks to the various writers and textbooks from which we have gained much of our knowledge of the disease and without which it would have been impossible to write a paper on this subject.

The P. H. and Marine Hospital service has also furnished us with what available literature they have.

Changes in the Personnel of the Medical Faculty at the University of Pennsylvania. —The trustees of the University of Pennsylvania have announced recently certain changes in the personnel of the teaching staff to go into effect at the beginning of the next academic session, September 1st, 1910. To fill the chair of Theory and Practice of Medicine made vacant by the resignation of Dr. James Tyson, Dr. David L. Edsall has been transferred from the chair of Pharmacology and Therapeutics and the vacancy in the latter will be filled by the appointment of Dr. A. N. Richards, now professor of Pharmacology in the Medical School of the Northwestern University. One hundred thousand dollars has been received for the endowment of a chair of Physiological Chemistry and Dr. Alonzo Englebert Taylor of the University of California will be its first occupant. Dr. Richard M. Pearce of the University and Bellevue Hospital Medical College of New York, has been appointed Professor of Pathology. Dr. Pearce will also direct the work of the department of Research Medicine recently established by an endowment of $200,000. Dr. Allen J. Smith, the present Dean of the medical school will be the occupant of the new chair of Comparative Pathology and be at the head of the newly instituted courses in Tropical Medicine. Dr. Paul Lewis, who will have charge of the laboratory of the Phipps Institute for the Study, Prevention and Treatment of Tuberculosis, now an intergal part of the University, has been elected assistant professor of Pathology.

SELECTED ARTICLE

THE INFLUENCE OF PROGRESSIVE MEDICINE ON THE LAW.*

W. L. CHAPMAN, M. D.

PROVIDENCE, R. I.

Pathologist of St. Joseph's Hospital.

The analysis of the somewhat presumptuous title of this brief paper might lead the prospective hearer to predict that a recital of shortcomings of one profession, together with a sprinkle of comparative vituperation, might be contrast with an exposition of the altogether righteous influences of the other. The learned professions are supposed by many to walk hand in hand for the common good and to be intimately associated one with another. But a moment's reflection will show that this is not so, that it is only occasionally that there is a union of the professions and that one is as a rule quite unknowing of the changes and progress of the other. It is quite generally admitted that there have been but few changes in theological thought during the past twenty years, and the same is true to a great extent of the interpretation of long existing laws. But the changes which have taken place in medical science are so sweeping that we now have a new order of things quite different from the old, and a summary of those which particularly affect the law is opportune and may be interesting. Consider for a moment the "Pure Food Laws," a code which was urged by Dr. Wiley not only that people might be protected from pecuniary loss, but also that the public health might be conserved and that people might become educated in the meaning and importance of food and drug ingredients. Observe the numerous health regulations which have been urged largely by medical influences, and note the measures which are still pending regarding our food supplies, and protecting the lives of the children of those who are unable to use careful economic discrimination. Movements are now on foot for better care of the insane and defectives together with a readjustment of the status of the insane with regard to criminal responsibility, and there is a rapidly increasing opinion, due in part to medical influences, that there is a need of a change in our present methods for the correction and punishment of crime.

The sphere of influence of the lawyer is in many ways much larger than that of the physician. While the physician deals

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with few patients in his practice or with students and physicians in the medical school or society, or perhaps occasionally issues articles on medical subjects for the popular press, the lawyer in the crowded court room, from political position and through the daily press, reaches thousands instead of individuals. As a lawmaker, as a part of the machinery (no joke intended) of the law his influence is enormous.

The medical aspect of legal matters is very closely interwoven with the functions of the sociologist. But medicine deals more intimately with causes, and thereby gives the sociologist his most valuable material. Sociology teaches that bad homes make criminals—medicine shows why this is so. Bad air, poor food, overwork, insufficient sleep and alcohol cause indigestion, malnutrition and tuberculosis, and the neurologist has shown that all of these diseases have important effects on the mind. Medical thought influences the law in various ways. One of the most important of these is the attendance of representative medical men at all hearings upon bills relative to the public health. Forceful and convincing speakers should be advised in ample time ot hearings by the proper officers of medical societies. In this way the accredited agents of the societies will be known as such and will express the sense of professional organizations. Other ways of influencing the law are that of personally informing individual members of the bar who may be interested in medico-legal subjects; by placing the findings of modern pathology and experimental medicine before the courts when engaged as expert; by co-operating with the magistrates of juvenile courts whenever they may be pleased to invite such concurrence; by keeping posted as to recent movements in prison reform, juvenile probation courts, and by using our influence for improving the conditions under which children are reared in our rapidly growing cities.

But little argument is needed to show that the physician and sanitary engineer are better qualified than any other professions to advise in matters of the public health. Unfortuunately there are many matters which as yet have not been thorough -ly investigated or proven experimentally. Conspicuous among these is the matter of stream pollution. We all know that certain rivers, one might almost say most rivers, smell badly, that fish cannot live in the water, that shellfish from such rivers have a bad taste and odor, and that the water is not clean and suitable for bathing purposes. It is quite another thing, however, to prove that such deplorable conditions are actually the cause of disease. But if one can prove that typhoid bacilli are to be found in the shellfish, then the law can step in and institute proceedings and eliminate the menace to the public health. The former circumstances represent offensive indecency, the latter criminal neglect. With the rapid increase in size of our cities the natural streams are soon transformed into sewers, and the sewer is not an open air park, but can be made such if surface drainage only is provided for and there is no pollution. The problem of such streams is earnestly commended to the attention of our lawmakers and executives.

Another important matter in which the two professions should work together is in the ventilation and suitable conduct of shops and stores. We say in a general way that bad air is a cause of ill health and disease, and we endeavor to have our schools well ventilated and properly heated, but as yet but little has been done to provide pure air for those who work in stores, to whom we owe as great a duty as we do to school children. This should be made a part of the great work which is now going on in the prevention and cure of tuberculosis. Working girls spend from eight to fourteen hours a day in the stores and shops, often working for less than a living wage in unsanitary quarters, and health departments should be endowed with full power of inspection and correction.

The law will find the medical profession ready and eager to assist in the suppression of vice and social evils, but before such evils can be appreciably lessened, wages must be higher and the cost of living lower. It is to be regretted that some of the millions which are being spent upon costly libraries for a few students cannot be shared with the poor who are often made and kept poor by the same power which made these donors rich—in providing model tenement houses which furnish clean homes at a minimum cost. This is not the time nor place to discuss the numerous methods of dealing with social problems; suffice it to say that the medical profession is doing good work in the education of the public by private interview, by the distribution of suitable medical literature and by public lecturing.

The taking up of the white slave question by the national government is most timely, the information of the public by the lay press is fortunate, and the legal profession has here the opportunity for the rendering of a great service to posterity.

Of all the problems offered for solution by the sociologist, lawyer and physician, none is of more importance than that of the growing boy. Recent inquiries into existing conditions occasion wonder, not that there are so many bad boys, but that there are so few. Investigation has shown that hereditary influences play a very important part in the etiology of criminality, and that social and economic conditions added to previously weakened constitutions, illiteracy and immoral environment, and not intrinsic badness, are responsible for criminal tendencies.

Munsterberg, in the examination of 200 boys in a criminal school, found that 127 were deficient with respect to strength of mind, hysteria and epilepsy. In 85 of these cases one or both parents were drunkards; in 24 cases the parents were insane, and in 26 cases were epileptics. There are plenty of other authorities who offer similar statistics. Now these boys although they have these hereditary handicaps, would not become criminals were it not for the influences they receive at the plastic and character forming age. When we stop to think of the native and intrinsic activity of boys, how they must be doing something all the time, that there must be some objective point for their activities—and then recollect their homes of squalor and the entire absence of anything to make home interesting, no outlet for this activity and opportunity for body upbuilding in the shape of running track, playgrounds, swimming pool, and no one to organize games or superintend their sports or to teach them how to act or talk— then and not until then do we realize that medically and sociologically and legally we are at work on the wrong end of the problem, and that tuberculosis, social evils and criminality will increase until we make better provisions for the proper rearing of the children of the poor. Thus far sufficient stress has not been laid on the personal element of the children's playground—we have failed to realize the great influence of the personality of the instructors over the children. The man to man influence is of even greater importance than that of body upbuilding. It is for the medical profession to urge on our municipalities the great importance of this movement in preventative medicine, and to show city governments that disease and crime can be prevented in open air breathing spaces. And it seems wrong to close up such parks upon the approach of cooler weather. The writer has noticed with considerable interest how many persons frequent the parks in the winter months; the benches have been removed and there is no place to sit down, but they could not take away the stone fountain, so they can sit down to rest on that. Playgrounds should be open until 9 p. m. and should have proper illumination and toilet facilities.

Never mind about the character as revealed by the facial angle or the malocclusion of the teeth, forget the significance of the bizygomatic breadth, the cranio-mandibular index and the bigonial diameter, but remember that bad homes mean tuberculosis, chronic indigestion, adenoids and idleness, and that bad books and pictures and a few teachers experienced in crime transform the beautiful and innocent child into the tough and the criminal.

This matter of suitable environment in which children may grow up is one which affects not only the poor, but the well to do. Through lack of out-of-door opportunity the children of all classes fail to spend their times in the open air and thus do not get its healthful influence.

We bespeak for boys and girls a better chance in life. We hope for house inspection, not only for suspected cases of tuberculosis, but for the antecedents of criminality, and we urge legislation which will adjust economic conditions that the workingman and his family may have better food, more pleasure and all those influences which make for health and better citizenship. Let us boom the municipal parks, public baths, playgrounds and district nursing, even if we have to curtail a little on the Fourth of July fireworks.

A feature of criminal law practice which needs correction—for it certainly is a well-established custom—is the so-called third degree method of investigation and coercion of confessions. Stories of this practice are read nearly every day in the papers, and it is particularly revolting to the trained scientific mind. The law should see to it that such methods are never used, and it might be suggested that there is a sufficient number of trained psychologists in every large city to be able and willing to apply modern methods of psychological investigation to any worthy case. Such would undoubtedly be willing to serve gratis, but a reasonable fee should be allowed by the court. The conviction or release of a criminal as well as his future should be determined, not by verbose and flamboyant lawyers, who seek to influence a jury by theatrical exhibitions and blank verse, but by careful investigation supplemented, whenever possible, by the applica-

tion of the scientific methods of the psychological laboratory.

Medicine must protest, too, against the conduct of jury trials in which adequate provision is not made for the personal comfort of jurors. The idea that once the charge is given to the jury it must continue its deliberations until members collapse fom sheer physical exhaustion, until they are jaded and willing to agree to anything; such circumstances are distinctly unfair to the defendant. It is thinking and deliberation rather than coercion and personal inconvenience that should influence jurors in the consideration of a cause.

This paper is not an essay on capital punishment and the writer holds no brief for criminality, but if nineteen hundred years of new thought and humane study has not modified our ideas of punishment and correction of crime further than the execution of any but the most deliberate and confirmed offenders, which can be proved to be free from mental disease, then the humanitarian has failed in his work and a more active propaganda of instruction on these matters should be instituted. That a criminal is to be an expense to the state is no argument for capital punishment, nor is it to be believed that an execution furnishes a terror which deters from murder. The problem of capital punishment, however, is one which differs in its features along wide limits in different geographical and sociological localities. Not that one would for a moment presume to place one state above another in the scale of social refinement, yet there is an enormous difference between the social problems of this state, where prosperity is apparent and where the public schools are exemplary, and where illiteracy is comparatively unknown, and states of the South, where illiteracy is common, where the public schools are undeveloped and social conditions primitive. France has seen the results of intemperance, poor food, unrestrained debauchery and unhygienic conditions in the enormous increase in crime and murder, together with organized bands of the criminal classes, and has called out the guillotine from its almost forgotten obscurity. We may profit by the example if in the near future it is proven that the step was a wise one.

It has been already shown by current medical literature that the problem of the negro in the South is very largely a medical one, and all measures for dealing with the negro socially, legally and criminally must necessarily have to do with the known medical facts of that race.

Here in the North, however, we fail to appreciate the shocking conditions of jails, penitentiaries, convict labor and the chain gang—circumstances which are a blot on the fair page of civilization. From a medical point of view as well as the psychological, the convict lease system has nothing to recommend it, and if a half of what appears in the lay press is true, the cause of humanity needs to be preached in the South, and the law has as great and noble a work awaiting it as has ever been its privilege.

The writer would earnestly offer objection to the use of handcuffs on boys, and avers that marching boys through the streets handcuffed together is an imperfection in our system of criminal law, inasmuch as it deprives a child of a desire to reform and ranks him with older offenders and convicts.

With regard to the criminal tendencies of certain families and the almost irresistible hereditary influence, the Juke family is not soon to be forgotten. Dugdale traced 1,200 criminals and paupers through seven generations, and the family is said to have cost the public over $1,300,000.

In no way has the medical profession had a more important influence on the law than in the commitment and care of the insane. In this state. however, one more step needs to be taken, namely, that of the commitment of indigent persons who are now committed by police magistrates. This matter is now under discussion, and it will shortly be recommended by the medical professions that such persons be committed to the State Hospital for the insane in the same way that they are committed to other institutions, saving the privilege of court commitment for those who demand it. We earnestly bespeak the co-operation of the legal profession in making this important change in the present existing conditions.

As to the measure recently presented to the Legislature requiring court commitment of all insane persons, it need be stated only that the entire medical profession opposes such a measure as being unjust, and injurious to the cause of humanity and scientific medicine.

The testimony of the medico-legal expert should be impartial. He should place be fore the courts his opinions as to the case in question as vouchsafed by the facts and principles of common medical and surgical knowledge and should be allowed to present to the court references to eminent medical authorities in defence of his opinion. In the examination of a patient he should be careful not to influence the story of the

patient by suggestive questions, and he should render his opinion without an intimate knowledge of the testimony of the preceding lay witnesses. Recent medical investigation has taught us much regarding the effects of trauma and nerve shock upon the nervous and circulatory system. Some of these findings have been studied experimentally, and it is quite proper not only that defendants be protected from imposition and malingering, but also that courts be made acquainted with the possible effects upon the system of stated injuries.

The long, involved and not readily understood hypothetical question should be abolished. In its place should be offered short, concise questions of clear intent free from misunderstandings. Both the law and medicine suffer in the popular mind by misleading circumlocutions.

It is the medical profession, then, that must clearly show to the law that dilute sewage is not suitable food and drink for human beings, and that people must and shall be protected from the predatory advances of trade and civilization; it is for the doctor as well as the sociologist to teach municipalities that the saloon-infested slums are bringing forth a harvest of crime; that children wholesome in mind and body cannot be reared in such environment, and that money spent in the enforcement of hygienic laws is spent in the prophylaxis of crime as well as disease. In due time we hope that the law will accept more recent conceptions of psychology and psychiatry and learn that some at least of the varieties of crime are symptoms of mental disease, and that the irresponsible doers should be cared for in special quarters as sick persons and not as deliberate criminals.

And the law owes us a duty, even as we stand ready to show it the phases and metamorphoses of diseased condition. That duty is to take steps to inform itself as to the probabilities of medical claims in the courts, to further hygienic and sanitary interests of peoples by the enactment and enforcement of suitable laws, to interest itself in the problem of the correction of crime without depriving the convict of health and forcing him to become a member of the criminal class.

We earnestly urge as the special needs of this city and State increased interest in and legislation appropriate to the following causes:

1. More playgrounds with competent instructors for children.

2. Domiciliary visits in the interests of social conditions as well as disease.

3. Plenary powers to boards of health in preserving the food supply and with respect to contagious diseases.

4. Measures suitable for the prevention of stream and harbor pollution or the enforcement of already existing acts.

5. The scientific control of meet and milk supply.

6. Amendment of laws regarding the commitment of the indigent insane.

7. A thorough statistical medical and sociological inquiry into child life with recommendations and the distributions of practical literature as to the improvement of existing conditions, in the homes of the poor and ignorant.

An Honorary Degree for Dr. Simon Flexner.—At the two hundred and ninth annual commencement of Yale University, held on June 22d, the degree of doctor of science was conferred upon Dr. Simon Flexner, medical director of the Rockefeller Institute for Medical Research.

The Importance of Pediatrics and the Position of Surgical Pediatrics in the College Curriculum.—The importance of pediatrics as a study in our medical colleges and recognition of the surgical diseases of children as a department of study was among the admirable features of the report on curriculum presented at the meeting of the Association of American Medical Colleges held in Baltimore in March. The report placed the minimum number of hours to be devoted to pediatrics at 50, which is an increase of 50 per cent over the present requirement of the Association, and yet is a very modest share of the 4000 hours of the clinical years (the third and fourth years) of the college course. Dr. H. D. Arnold of Boston was chairman of the subcommittee of curriculum for the clinical years, and Dr. S. W. Kelly of Cleveland member representing pediatrics. The report goes on to say, "The allowance for pediatrics is intended to include instruction in the exanthemata. In many other ways medicine and pediatrics overlap. Useless repetition can only be avoided by a proper understanding between the teachers of these two subjects, and a certain elasticity should be allowed a school for the purpose of assigning time to one subject or the other according to where the borderland subjects can best be taught. In the same way pediatrics and surgery touch and overlap. In one subject or the other the surgery peculiar to children should receive attention. Valuable suggestions in relation to the teaching of pediatrics will be given in an appendix to this report."

THE MEDICAL FORTNIGHTLY

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Edited By
DR. THOS A. HOPKINS
And the Following Associates:
JOHN McH. DEAN, M. D., Surgery.
ROBT. H. DAVIS, M. D., Dermatology.
W. E. FISCHER, M. D., Ophthalmology.
R. B. H. GRADWOHL, M. D., Pathology.
A. F. KOETTER, M D., Oto-Laryngology.
O. E. LADEMANN, M. D., Internal Medicine.
W. H. VOGT, M. D., Gynecology.
O. H. BROWN, M. D., Tuberculosis.
Editorial Rooms, Suite 319-320 Century Building, St Louis, Mo.

EDITORIAL

The Religio-Medical Masquerade.

We profoundly regret that Dame Fortune has not favored us with great wealth; we have found a place where ten thousand and more good dollars might be invested to the good of mankind and the advancement of intelligence. We would like each and every one of the subscribers of the Fortnightly to have a copy of the book of Frederick W. Peabody, LL. B., which has lately appeared under the above title.* We believe that the subscribers of the Fortnightly would, after reading the book insure for it several times ten thousand readers.

Mr. Peabody is, as his title says, a lawyer; but his title does not say that he is prominent at the Boston bar and is considered exceptionally an authority by his legal brethren, but it is nevertheless a fact. Some years since he was called upon to undertake a case opposed to Christian Science, at the time he had no preconceived notions of the cult or of its beliefs, but the developments of this case led him to very decided opinions which induced him to make a thorough investigation of the institution in all its aspects and has finally resulted in the publication of this volume, which is unquestionably the best thing of its kind. Mr. Peabody believes that the English language means just what it says and it is not legitimate to annihilate words or distort their meaning just to satisfy the ambitious aims of a not overly scrupulous old lady; he also believes in honesty as commonly understood and in Christianity as taught by the "Meek and Lowly" One. He has discovered, as was very easy to do, that there is nothing "meek and lowly" or philanthropic about Christian Science; that it is neither Christian nor scientific; that it is made to delude and for the profit of its founder and her immediate satellites. Out of the very mouth of the founder of the cult he convicts her of such tremendous errors against truth that is one of the surprising things of the time that there are any thoughtful people who give her credence. Christian Science seems to be of mongrel parentage, but it was the self-styled equal of Jesus who *copyrighted* it, and it is she who is profiting financially from its extension. In her immaterial world material dollars are very welcome. The testimonial meeting is its promoter; every doctor knows how easy it is to get testimonials and of how little worth they are. But the self-diagnosed case of tuberculosis, or nephritis, or diphtheria, or neuralgia, or appendicitis, or what not, even in the presence of denial of the existence of anything so material, when announced miraculously cured in an experience meeting carries conviction to the credulous. It matters not to them that an expert needs the microscope and the special training of all the five senses to diagnose the material trouble when present. Christian Science would make every sore throat diphtheria, every colic appendicitis, every pain in the back or bladder nephritis, and it is to laugh.

But it is not to laugh, it is pathetic; those neurasthenics who possess imaginary ills, who need nothing but an end to introspection, who need above all else to live regularly and naturally, to think cheerfully and to cease hunting for symptoms, these are benefited by Christian Science, not because of anything Christian or supernatural in it, but simply because it is a hard and fast fact that if something does not exist and you become convinced of the fact then it doesn't exist. But if it does exist you cannot think it out of existence, Mrs. Eddy to the contrary notwithstanding.

Mr. Peabody tells us many things about Christian Science and its founder which are new to us, and many things which we have known but which he puts in a new and convincing light; under the light which he sheds on the subject we are again startled at so colossal and shocking a rehabilitation of superstition in the guise of a religion; that witchcraft has again appeared and gained converts in this 20th century, and that the most sacred of human relations are being assailed by it. It is not a matter which physicians should oppose because it is a competitive method of healing (it is never really that), they should oppose it as intelligent men and women who would save the people from so unhealthful a doctrine as judged from medical, mental and religious standpoints.

*The Hancock Press, Boston, Mass.

At present there is no particular or apparent gratitude for those who interest themselves in pointing out the deficiencies of this cult, but the day is coming when the world will wonder that so great a delusion could have flourished at this time and at the credulity of a supposedly intelligent people.

Medical Martyrs.

The literature of the world is filled with thrilling tribute to the grandeur of those who have sacrificed their lives in the cause of patriotism and religion, arches and monuments have been erected to their memory and the youth of every country is taught of their exploits. But in its quiet way the science of medicine has been contributing its quota of martyrs since its history began and the story of their endeavors and exploits is modestly concealed but is quite as thrilling as is that of those who have attracted much more attention. Among those who have recently sacrificed their lives for mankind and in a warfare of the most vital character and whose names should be honored by the Nation are Walter Reed, who gave his life that the world might know yellow fever; Howard Ricketts, who sacrificed his life in his researches with those tropical diseases common to Mexico; and, later still, Mirhan K. Kassabian, who has sacrificed his life to the advancement of our knowledge of the X ray. Along with these might properly be mentioned the many who have been maimed and crippled in the cause, with whom fate has not dealt so kindly and who are left to live lives of pain and invalidism, who have offered all that they have to the cause which is dear to every physician and who would not begrudge one pain, or their lives even, if they feel that the cause of humanity has been advanced by their effort. Heroism in medicine is so common that it causes little comment within the profession, it seldom leads to a civic demonstration or to any acknowledgment of gratitude. Workers in our profession have to work and take risks from very enthusiasm rather than from hope of recognition and possible reward.

The death of Kassabian attracts attention to the history of the X-ray. Though unquestionably an agent of tremendous value it has also proven itself an insidious cause of mutilation and death to those who have worked with it daily for long continued periods, insidious as no experimentation with cultures ever was. Through these misfortunes and the heroic faith of those who dared on the chance the profession has come to know the X-ray and it has been placed in its proper place in our therapeutic armamentarium. Kassabian has done his work and done it well. His name will live in medicine. But is this sufficient? Should not the attention of the Nation and the world be forcibly called to these heroic ones who are doing more for the advancement of civilization in a humanitarian way than do those who are instrumental in the conquering of a nation? America should erect the monuments for such, they should be the nation's pride as the heroes are its glory.

New Licentiates in Medicine.

The Missouri State Board of Health has lately announced the result of its June examination of applicants for license to practice in Missouri; out of 158 examined 143 have been found duly qualified and have received the Board's certificate. The ratio between the successes and failures is a very normal one and reflects credit on the work being done in the schools represented. The following physicians were licensed: Reuben Adcox, A. D. Bradbury, Roy Clifford Berry, Lawrence B. Bitz, Porter Douglas Blackburn, Harry James Blount, Timothy S. Bourke, William Burley Bowman, Gray Chandler Briggs, Edward P. Buddy, Ernest Edwin Bullard, Charles Albert Bunge, Stanley Sherman Burnes, Floyd Smith Bates, Clarence S. Branson, Luther M. Callaway, Frederick Putnam Cowdin, Harry F. Craig, Adolphus Jackson Crider, Leland Collier, Ralph Oliver Drume, Adrain John De Hoon, Arthur H. Deppe, Cecil Harrod Dickerson, Virgin A. Davis, John J. Dorsey, Edwin Douglas Edwards, Adolph Mathew Evitz, J. A. Elmere, Harold W. Fay, Charles Ernest Feller, William Orzo Finney, Alonzo Leo Fitzporter, Emma Elvine Fleming, Geo. William Flynn, Walter Emil Frank, Lee O. Frech, Maximilian Gansloser, Arnold Garlitz, Philip Griesbaum, Albert Jacob Griot, George August Griot, Terrence P. Gronoway, Norman W. Getman, Oliver Sheley Gilliland, Frederick Hagler, Claud Dickerson Halley, Joseph Reagan Hamlin, Robert Morris Hardaway, James Clinton Hawkins, Louis Andrew Heely, Joe Winsor Howland, Kenneth Bowles Hufman, Edward Kultgen, Lewis Clifton Kuyrkendall, Ernest H. Kyle, Orley Clyde Kilbourn, Galean Forrest Kimball, David R. Lamb, William Joseph Langan, Claud

L. LaRue, Frank LaRue, Harvey D. Lamb, Ruskin M. Lhamon, Horace Archie Lowe, Thomas. S. Lorton, R. E. Hughes, Frank X. Hartagan, Joseph Dexter James, Elizabeth Jamieson, Edgar William Johnson, Maurice I. Kalpin, John Phillip Keim, Granvil Lessen Kerley, John Tyler Keyton, Henry A. Killion, Logan G. Kimzey, Julius Peter Kissel, William A. Kluegal, Lewis B. Knecht, Carl J. Muller, Ralph E. Moeser, Henry T. O'Kelly, George Osborne, William Garfield Parker, Julian C. Petit, Claud D. Pickerell, Jerome F. Potts, James Madison Potts, Elwin Dene Price, John Leo Price, Eugene A. Pond, Francis Rankin Ritchie, John Francis Roeser, Andrew Howard Ryan, George Carlos Remley, Howard C. Rice, Dean S. Rising, Charles Edward Schleeter, Lawrence Schlenker, Edgar P. Sherman, Debora Rochell Schuyler, Raymond Ewell Scott, Frederick Oscar Schwartz, Selig J. Simon, William A. Smith, George Franklin Smith, P. W. Lutterlog, Richard P. Lewis, David S. Long, Thomas Kent McAlpine, James Gilbert Macrae, Amos B. Madison, Reuben Ferdinand Martin, Benjamin F. May, Oscar Daniel Meyer, Milton Montague Meyers, Lester Allen Millikan, Charles Morris Ming, Peter G. Moskop, James R. Mott, Okey Warren Snodgrass, Bernard Louis Spitzig, William A. H. Steinmann, Arthur Francis Sternfels, Rhoderick Eue Streetor, John O. Skinner, William F. Smith, Er. Stanton Stofer, Wilcox George Thonrne, Herman H. Thym, John R. Vaughn, Carl Henry Wachenfield, John Newell Waggoner, Arthur William Westrup, Thomas Frank Wier, Leo A. Will, Abraham Weinberg, Ursa C. Weston, Leland P. Welhelm, Jesse P. Williams, Bruce Tucker Yule.

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Frozen Eggs.—The confiscation of 25,000 pounds of frozen egg products, said to be the largest seizure ever made by the government, took place in Brooklyn, New York, on July 7, by order of the Department of Agriculture. Examination of sample of the eggs made by the chemists of the department resulted in the estimation that each gram of the egg product contained 300,000,000 organisms, some gas-producing, and some of the streptococcus group. The desiccated eggs were forwarded by a packing house in Chicago. Premissive to destroy the product according to law has been granted, and unless a legal fight is made the seized eggs will be disposed of by the Health Department.

MEDICAL PROGRESS

Comprising the Regular Contributions of the Fortnightly Department Staff.

INTERNAL MEDICINE.

O. E. LADEMANN, M. D.

The Treatment of Hemorrhage from Gastric Ulcer.—Kaufmann (Am. Jour. of the Med. Scs., June, 1910) pleads for the more frequent employment of gastric lavage as a direct means of checking the bleeding. He recommends to insert the tube just far enough to secure siphonage and to limit the quantity of water each time to about 300 c.c. Gastric lavage possesses the following advantages: It releases partially occluding thrombi, it relieves gastric distention by removing large quantities of contents. These stagnating masses are usually very sour and fermenting, and their presence not only causes nausea and pain, but acts very harmfully by constantly irritating the mucous membrane to intense hypersecretion, thereby further increasing the amount of gastric contents. The removal of the fermenting masses not only relieves annoying symptoms of gastric irritation but eventually brings about a direct cessation of the bleeding by allowing the emptied stomach to contract and this aids in the occlusion of the eroded vessel. The evacuation of the stomach and the contraction which follows it are of the greatest importance for the improvement of circulatory disturbances by relieving cardiac embarrassment. Acute gastric dilation which is frequently associated with gastric hemorrhage is prevented by lavage. The writer says it is certainly not superfluous to emphasize the advisability of gastric lavage, when we realize that nowadays physicians can be convinced more easily in favor of laparotomy than for the use of the stomach tube. At all events lavage should be tried before an operation is decided upon. While it can do no harm, lavage will frequently check the bleeding and postpone an operation which may prove necessary for other reasons. The author is of the opinion that the good results derived from lavage will do away with the deeply rooted prejudice against using the tube in bleeding ulcer.

The Present Status of the Ophthalmo-Tuberculin Reaction.——Higgins (Wisconsin Med. Jour., April, 1910) bases his remarks on a study of 50 cases. He says, that a positive reaction is presumptive evidence of tubercular disease. The severity of the reaction does not correspond with the extent of the disease. The presence of a well

marked reaction indicates individual activity against the disease. The test is not altogether free from danger and should not be used in eyes with a history of, or in the presence of a diseased condition. It should not be used to diagnose tubercular disease of the eyes themselves. It is of more clinical value than the other local reactions, with the disputed exception of the Moro ointment method.

Graves' Disease.—Mumford (Boston Med. and Surg. Jour., June 2, 1910) elaborates on both the medical and surgical aspects in the treatment of Graves' disease. He summarizes his article as follows: (1) Graves' disease is due to abnormal activity of the thyroid gland; (2) in advanced Graves' disease degenerative changes in the thyroid gland may lead to a shifting symptom complex ending at last in the positive signs of a myxedema; (3) the histology of the gland in Graves' disease indicates shifting, advancing and retrograding symptoms; (4) an enlarged thymus is nearly always found post-mortem in patients dead of Graves' disease; (5) advanced Graves' disease may exist without the presence of all the classical symptoms; (6) Graves' disease can nearly always be cured if taken early; (7) the sera of Rogers and Beebe cure a goodly percentage of cases; (8) through hydrobromate of quinine (neutral), as used by Fochheimer and by Jackson, a large percentage of improvements and of cures was found; it is a pity so few cases have been reported; (9) the great and increasing experience of qualified operators is showing that more than 70 per cent of Graves' disease patients are now being cured by partial thyroidectomy, and the percentage of such cures is rising; (10) treat the cases seen early by rest, by sera and by hydrobromate of quinine; if no improvement results in two months, operate by thyroidectomy, and always regard the operation as the surest one.

Purpura Caused by the Ingestion of the Iodids.—Knowles (Jour. A. M. A., July, 1910) says purpuric eruptions caused by the ingestion of the iodids may be divided into two provisional groups. The first group includes the extensive petechial and hemorrhagic, bullous cases which occur in those individuals with organic disease, particularly of the kidneys or the heart; or with a lowered condition of the general economy, making them more susceptible to the effect of the drug, or with a strong idiosyncrasy to the same. The second group includes all cases with a localized distribution, particularly those in which the eruption is limited to the lower extremities or lower legs which occur in those individuals in perfect health, and which can be explained only on the theory that a mild idiosyncrasy to the iodid is present. Sex and age have nothing to do with the occurrence of the eruption, although most of the cases developed during middle life, and a considerably larger percentage of males were attacked than females. The drug was administered in twenty-two of the sixty-one cases of syphilis, for rheumatism in nine cases, and in the remainder in numerous other conditions, none of which apparently exerted any predisposing influence. The quantity of the drug given and the length of administration varied so markedly that an average dose or the length of time of continuance cannot be stated, the personal element alone deciding the question of an eruption. The eruption was chiefly of one type, either the petechial or the hemorrhagic bullous, although in a few cases other forms of iodid lesions were present. In the hemorrhagic bullous cases, although in several the eruption was somewhat generalized, the face and the extremities were most involved, particularly the face and the arms. In the petechial type the eruption in a great majority of the cases was limited to the lower extremities particularly the lower portion of the legs; in a few cases, however, the outbreak was somewhat generalized or noted on the upper as well as the lower extremities. Mild symptoms of iodism were present in a few cases, and severe reaction to the drug was noted in two cases. Edema of the glottis was found in two instances. Lesions were found on the mucous membranes in a few cases; hemorrhages occurred from the mucous membranes or from various organs in a few others. Organic disease of the kidneys and the heart were found in but few, ten out of sixty-one cases. The various salts of iodin are all capable of causing a purpuric eruption. The pathologic changes of the skin were noted in the immediate vicinity of the blood vessels and in the walls of the vessels themselves. Iodin is rapidly absorbed by all mucous and serous surfaces and rapidly eliminated, chiefly by the kidneys and also through the skin itself. The leucocytes play a distinct role in the absorption of the drug. Hemorrhagic bullous cases, of extensive distribution are frequently fatal, seven out of the eleven in this series ending fatally. Petechial, non-bullous cases rarely terminate in death, unless there is marked disease of the heart or the kidneys or a very extreme intolerance to the drug; two out of fifty cases of this type ended fatally.

Actinomycosis (Streptothricosis) in Man; with the Report of a Case of Pulmonary Involvement. —Alfred C. Wood and Augustus A. Eshner, of Philadelphia, Pa. (Med. Rec., June 4, 1910), give two names as applied to the same organism, actinomycis and streptothrix, there being a number of varieties of the ray-fungus. The parts are clubs or mature germs, mycelium threads or spore forms, and micrococcus forms. The filaments are always found, the other forms not always. The ray-fungus much resembles the tubercle bacillus. It occurs on grains and grasses, and thus is communicated to grass-eating animals and to man by way of the mouth. It has also been communicated through small wounds of various kinds. In the organism it is carried by the blood stream, or may be air borne. Any part of the body may be affected and it may become generalized by the blood stream. The pus is scanty, thick, greenish, offensive, and contains yellow granules. The action of the ray-fungus on the tissues causes proliferation of the round cells and formation of nodules which undergo fatty or grandular degeneration as the tuberculous nodule does. There are two types of disease, the acute inflammatory and the slow or neoplastic. The growth spreads by continuity. Treatment consists of removal of the infected area, or of the diseased mass by the curette, and administration of iodides internally. In the lung actinomycosis simulates tuberculosis, pleurisy, or empyema. There are no typical symptoms. Study of the suptum will show the organisms. Illustrative cases are given.

Cerebrospinal Fever.—In a contribution to Merck's Archives Dr. Carroll Chase fully sets forth the cause symptoms, sequelae, diagnosis, prognosis and treatment of cerebropsinal fever, otherwise named cerebrospinal meningitis or spotted fever. The cause is a definite micro-organism, similar in morphology to the gonococcus, known as the diplococcus intracellularis meningitidis, commonly called the meningococcus, and until the discovery, by Dr. Simon Flexner, of the diplococcus antiserum the treatment was symptomatic, the most modern textbooks saying, in effect, "no specific," and "the treatment is purely symptomatic and thoroughly unsatisfactory." The prognosis used to vary with the epidemic, all the way from 30 to 90 per cent. True fulminate cases invariably died in a few hours. Until recently it was said that cases under one year never recovered. Since the Flexner serum has come into use the mortality, in cases in which it has been given, has dropped to about 25 per cent, while in New York City, in 1905, there were 1780 cases, of which 1630 were fatal, a mortality of 76 per cent. In administering the anti-serum a spinal puncture is made, and 30 c.c. of the anti-serum, heated to body temperature, is slowly injected into the spinal canal. This is repeated every twenty-four hours for three or four days or longer, depending on the rapidity of recovery. The earlier the injection can be made the better the result. As the anti-serum is harmless if carefully given, it is not wise to wait for the microscopic diagnosis to be made in doubtful cases. Symptomatic treatment should be given if the serum cannot be obtained, and more or less medicine will be required in addition to the serum in cases in which it is used.

THERAPEUTICS

C. W. HEPBURN, M. D.

The Action of the Coal-Tar Anodynes.—In Illinois Medical Journal Dr. Bernard Fantus says that in pain-relieving power the coal-tar anodynes are not omnipotent as is morphin. They undoubtedly relieve pain in an entirely different manner. Morphin produces its first effects in the psychic sphere, and the best explanation of its anodyne action is that it lessens the appreciation of sensory stimuli. The coal-tar anodynes, on the other hand, affect the nervous system in an entirely different order. They act on subcortical centers much earlier than they do upon the cortex. Psychic phenomena do not occur until after marked disturbance of the functions of the basal ganglia and of the medulla has been produced, showing itself in their antipyretic action and in their marked tendency to produce collapse. The author formulates the theory that their anodyne action is likewise due to influence upon the structures at the base of the brain, for they evidently do not affect the cortical end-station for sensory stimuli as morphin does, nor do they act upon the lower sensory neuron, their action upon the spinal cord and its adnexa being quite subordinate. Therefore, they most probably act upon some point in the intermediate sensory neuron, perhaps upon the optic thalamus, the great sensory ganglion at the base of the brain. The pains for the relief of which these substances have been found especially useful are those that originate from nutritional disturbances within the nerve structures themselves, neuralgic pains in the widest sense of the word. While useful against the pains of

mild neuritis, they fail in the pains of severe neuritis, as they fail in inflammatory pains in general, as well as in pains due to gross anatomic disturbances. It must be clearly understood, however, that the coal-tar anodynes are mere symptom medicines, that is, that they temporarily relieve the symptom (pain) without improving the underlying morbid condition. Indeed, many a time the underlying condition is made worse, just because the pain is relieved and nothing is done to relieve the cause of it. The author dwells upon the dangers attending the use of these powerful poisons in certain conditions and the ease with which any one can obtain them. Druggists should be prohibited by law, in his opinion, from dispensing these "potentially homicidal drugs" without a physician's prescription. The various members of the group and their combinations are then discussed in turn.

The Theory and Value of Tuberculins.—Discussing the theory of the action of tuberculins and their value in diagnosis, in California State Journal of Medicine, Dr. Edward von Adelung gives the following resume as seeming to him to fairly present the consensus of opinion of experienced bacteriologists and practitioners on the subject: 1. Tuberculin acts by stimulating the body cells to perform their immunizing functions. 2. The essential constituents of tuberculin are not defined, but include the proteid-nuclein of the tubercle bacillus. 3. All turberculins produce the characteristic reaction. 4. Bouillon Filtre is one of the safest tuberculins for beginners. 5. Of the diagnostic tests, Koch's subcutaneous test is by far the most reliable. Its use is not free from danger. 6. The conjunctival test is too dangerous for general use, although fairly reliable to indicate a present or past infection. 7. Therapeutically administered by experienced persons, tuberculin is a valuable adjunct to the treatment of tuberculosis. Under proper supervision it is practically harmless. 8. In glandular tuberculosis tuberculin is of signal value. 9. Experience and painstaking supervision are necessary to avoid injurious effects. 10. In general, the tuberculins are of definite vaule in diagnosis and therapeusis.

Lumbar Analgesia.—Dr. Max Breuer, who has had years of experience with this method of anesthesia, says, in Medical Record for March 19, 1910, that a line drawn across the umbilicus gives the limit of the field of operation which it is safe to anesthetize, Jonnesco's demonstrations to the contrary. The analgesia lasts from 50 to 70 minutes and is complete, if the technic is correct. He has found stovaine in 0.04 doses to be a reliable drug. The point of puncture is between the first and second, or between the second and third lumbar vertebrae. Absolute asepsis is of course indispensable. The selected area is painted with tincture of iodine. The patient sits on the operating table sideways, his feet resting on a chair, and has to bring his spinal column into an extreme curve. An assistant pressing his flat hand against the stomach will help him to accomplish that. Ethyl chloride spray, or, if you prefer, a small dose of morphine subcutaneously will add to the patient's ease. After straightening out as much as possible all lateral deviations of the spinal column, the needle is put through the skin only, as closely as possible to the lower vertebra. The patient usually straightens up at this moment. After he has resumed the right position, and after you have convinced yourself, looking from above downward, that the needle is in the median line, the stylet is removed, and the needle, pushed forward and slightly upward, will enter the canal 3 to 5 mm. wide, between the two halves of the cauda equina. The proof of the proper puncture of the subarachnoidal space is the appearance of the cerebrospinal fluid in a stream, not in drops. In case of failure retract the needle and bring it forward again, trying to reach the median line. After injecting the drug, aspirate some liquor and inject again, otherwise you will lose the drug remaining in the needle. In the canal mentioned the drug can circulate freely and reach the nerves of the cauda and the roots of the branching off nerves. As the nerves in the cauda are strictly separated in sensory and motor nerves, the posteriorly located sensory nerves are the ones to be reached and, therefore, the point of the needle should stop immediately when the liquor flows. The results in the author's hand have been delightful; after-effects, headache or backache were hardly noticed.

Diplosal: the Most Interesting Derivative of Salicylic Acid.—Merck's Archives for March, 1910, contains a paper by Dr. Nikolai Gawrilow, translated from Terapewtitscheskoje Obosrenie, 1909, No. 12, for that journal, on diplosal and the comparative action of the preparations of salicylic acid upon the gastric digestion. Sodium salicylate, as well as many of the other combinations of salicylic acid, frequently give rise to gastric disturbances, especially in patients with organic or functional disturbances of digestion, which may be so

severe that the further use of salicylates is excluded. Therefore chemists have sought for a combination which should possess the largest possible percentage of salicylic acid, yet should pass through the stomach without change. It should have the properties of an acid and be tasteless and odorless. In the intestinal tract it should slowly be converted into the salts of salicylic acid as a result of pancreatic digestion; these salts should then be absorbed by the blood, so that a gradually increasing therapeutic action would be obtained. Only partial success attended these efforts until about half a year ago Boehringer & Soehne introduced a new synthetic compound, the salicylic ester of salicylic acid, diplosal, or salicylosalicylic acid. Since this drug yields an exceptionally high percentage of salicylic acid, does not affect the stomach, and is slowly hydrolyzed in the intestinal tract under the influence of the pancreatic juice, and in this way is uniformly absorbed, it would seem that further search for an ideal compound of salicylic acid is unnecessary. This is also the opinion of Prof. Minkowski, who used diplosal in his clinic and determined the practical value of the drug. Diplosal was found to be well tolerated; it never gave rise to albuminuria, even in daily doses of 6 gm. (1½ drams) given for several weeks, nor were tinnitus aurium or profuse perspiration seen. This is probably to be explained by its very slow decomposition and slow absorption in the intestines. Gastric disturbances of any kind were absent. Levy and Strauch treated, 150 patients with diplosal, including cases of rheumatism, cystitis, gonorrhea, sciatica, arthritis, etc. In every case the desired effect of the salicylic acid was obtained without any after-effects.

If the clean milk movement, which is just beginning to show results in this country is worth fostering; if a low infant mortality is worth striving for; if it is desirable to make child life healthier and therefore happier; if the philanthropy that attends free pure milk dispensaries is worth encouraging; if the co-operation of the entire medical profession in this large field of preventive medicine is valuable; if the divorcement of the health affairs of our cities from politics is commendable; then the American Association of Medical Milk Commissions has a definite function to perform in our national life and should receive some public support.—Otto P. Geier.

WHAT THE MEDICAL EDITORS ARE SAYING

Colored Underclothing.—The use of colored underclothing in summer, particularly in our more southerly states, would seem to be justified. When it was first suggested that skins were pigmented to exclude too much light, the profession was quite skeptical, physicians preferring to consider nature a fool to create colored races in light countries. The light theory was utterly rejected by Americans but has since been accepted by the French and British, who are now taking steps in the tropics to give themselves the same protection by colored underclothing that nature gives to the natives by colored skins another of the innumerable instances where an American idea must go to Europe for acceptance. Now that the subject is considered settled abroad, we are tardily taking it up. In an article in the Medical Press of June 2, 1909, Drs. Phalen and Nichols describe the experiments now being made to find out whether it will do any good to protect our soliders from tropical light by opaque underclothing, and they make the astounding assertion that they are personally in "the strictly agnostic mood." So there are still some who think that the pigment of the Filipinos is merely a useless freak of silly nature. This is depressing yet it shows the proverbial difficulty with which a new idea attains recognition. It is also surprising that soldiers must wait so long to profit by scientific advances, for it is now fifteen years since the facts were first published. We must wake up or we will lose our reputation for progressiveness and keen recognition of new useful discoveries. We might even be accused of interfering with the health of troops if agnosticism is to be a recognized policy.

Opaque clothing is becoming popularized and it is interesting to note that the instinctive demand for it, not only in the tropics but in America also, is so great that manufacturers are flooding the market with enormous quantities of black undergarments. Lay experience already shows it to be comfortable and beneficial. It is of course wholly unnecessary in such cloudy places as northern Europe nor do the swarthy Italians need it, but blond migrant types must use it when residing in light countries where the native is pigmented. It is considered well worth a trial in this latitude for it has been known to prevent those nervous conditions so common in the light season. That is, it begins to look as though the lay public will lead and the

medical profession follow. It might be well to direct attention to the need of better head covering if one is exposed to the sun. All tropical natives use eleaborate head dresses for this purpose, and it is noticed that our own outdoor workmen have an instinctive desire for black felt hats. Agricultural laborers in our south, and Mexicans also, use opaque hats to a large extent, and prefer those with wide brims. The dinky little straw hats with narrow brims affected by city dwellers, afford no protection at all in the sun, and may be the cause of much suffering as well as actual sickness if the wearers do not remain constantly in the shade. There is need of a great deal more knowledge of summer hygiene in order to combat the fashions of our cities which are much nearer the tropics than we realize.—American Medicine, June, 1910.

For dropsy due to anemia, Blaud's pill will be found a valuable medicament.

Speaking of purgatives, Prof. Bartholow used to tell his class of an old soldier who always carried about him a bullet, which he had used for forty years as a cathartic. It acted by its weight.

Bequest of Dr. Byron Robinson.—By the bequets of Dr. Byron Robinson, a graduate of the University of Wisconsin, in the class of '78, who died last March the university receives a large collection of books and pamphlets on anatomy, supplementing the gift of over a thousand volumes on the history of medicine made by Dr. Robinson shortly before his death. The collection is to be known as the Robinson-Waite Library, in honor of the donor and his wife, of Dr. Lucy Waite. The whole collection, amounting to over 1,500 volumes and valued at over $4,000, gives the university the most complete library on anatomy and the history of medicine of any state institution, and one of the best in any medical school in the country. Dr. Robinson's library is unusually rich in early American medical treatises and old anatomical plats, including many fine copperplates of the best European scientific artists. Funds for the establishment of a scholarship in anatomy in the University of Wisconsin Medical School, valued at $550 a year, are also provided in the bequest. This will be known as the Byron Robinson scholarship in anatomy, and is to be held by both men and women students in medicine. The purpose of this scholarship is to encourage the anatomical, physiologic and pathologic study of the sympathetic nervous system.

TO THE FRONT SAINT LOUIS

THE MEDICAL FORTNIGHTLY

A Cosmopolitan Biweekly for the General Practitioner

The Medical Fortnightly is devoted to the progress of the Practice and Science of Medicine and Surgery. Its aim is to present topics of interest and importance to physicians, and to this end, in addition to a well-selected corps of Department Editors, it has secured correspondents in the leading medical centers of Europe and America. Contributions of a scentific nature, and original in character, solicited. News of Societies, and of interesting medical topics, cordially invited.

Advertising forms close on the first and fifteenth of each month. Time should be allowed to submit proof for correction. Advertising rates on application.

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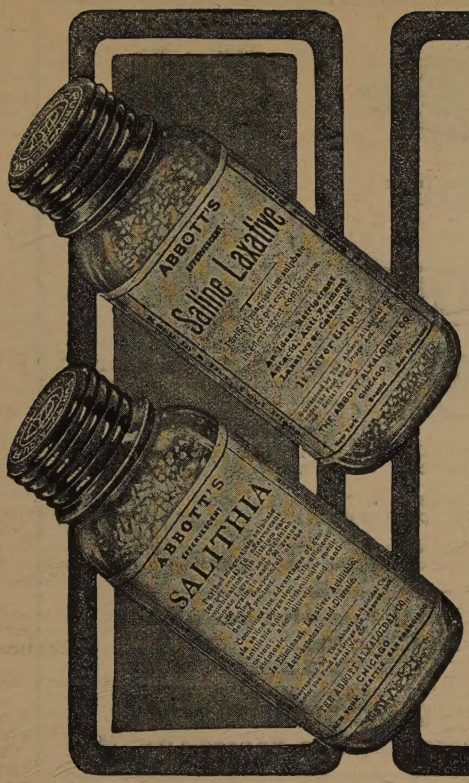
Subscriptions may begin at any time; volumes end with June and December.

Contributors should understand that corrected typewritten copy is essential to clean proof and prompt publication, and is much more satisfactory than manuscript. Original articles should be as condensed as justice to the subject will allow.

Editorial offices in St. Louis and St. Joseph, where specimen copies may be obtained, and subscriptions will be received.

Medical Society of the Missouri Valley.—The twenty-third annual meeting of this society will be held in Council Bluffs, Thursday and Friday, September 1 and 2, under the presidency of Dr. A. B. Somers. Invitations have been sent to all the presidents of the associations within the province of our association, and the oration of medicine and surgery will be given by men of national reputation. The arrangements are under the auspices of the Pottawottamie County Medical Society, Dr. John F. Sprink, chairman. Those who desire to present papers at this meeting, will kindly send titles to the Secretary, not later than August 10th. Abstracts of papers must be furnished by August 15th, to insure a place upon the program. Contributions from internists specially solicited. If you are not a member of this progressive society send in your application at once to the secretary. Meetings in September and March of each year. Initiation fee $1.00, annual dues $2.00. Chas. Wood Fassett, Secretary.
St. Joseph, Mo.



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Both are appreciably better than the best the substitutor has ever been able to offer—in regularity of action and every other particular. The first (purified magnesium sulphate 60%) is unexcelled as an ejector of *alimentary debris*—the second (same with colchicine and lithium) as an expellant of *uric acid*.

If you have not received samples we shall be pleased to send one or both just to convince you.

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There is no possibility of poisonous effect through the absorption of Listerine.

Listerine Dermatic Soap is a bland, unirritating and remarkably efficient soap.

The important function which the skin performs in the maintenance of the personal health may easily be impaired by the use of an impure soap, or by one containing insoluble matter which tends to close the pores of the skin, and thus defeats the object of the emunctories; indeed, skin diseases may be induced, and existing disease greatly aggravated by the use of an impure or irritating soap. When it is to be used in cleansing a cutaneous surface affected by disease, it is doubly important that a pure soap be selected, hence Listerine Dermatic Soap will prove an effective adjuvant in the general treatment prescribed for the relief of various cutaneous diseases.

"The Inhibitory Action of Listerine," a 128-page pamphlet descriptive of the antiseptic, and indicating its utility in medical, surgical and dental practice, may be had upon application to the manufacturers, Lambert Pharmacal Co., Saint Louis, Missouri, but the best advertisement of Listerine is . . . . . .

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MEDICAL MEMORANDA.

When a Tonic is Needed.—When a tonic is needed, there is none that will give more certain or uniform satisfaction than Gray's glycerine tonic comp. For seventeen years it has been serving the profession, and the esteem in which it is held to-day bears eloquent witness to its unvarying quality and efficiency.

A Tissue Nutrient for the Summer.—Ofttimes during the summer, the physician is put to his very wit's end to find tissue nutrient for his tubercular and debilitated patients; one that will agree with them during the hottest weather. Cord. ext. ol. morrhuae comp. (Hagee) by reason of its palatability and the ease with which it is assimilated, is the ideal agent of this character not alone in the summer but at all other seasons.

Nature and Art.—A. A. Marks, the artificial limb manufacturer of New York, has issued a most attractive brochure, illustrating the various amputations, and giving logical advice regarding the care of the stump preparatory to fitting artificial limbs. The surgeon who calls Marks to his assistance, will find him a most valuable aid in providing his patient with a leg or an arm that will prove a comfort and a useful member. It is not necessary for Marks to see the patient, as many thousands of grateful patients will testify, the instructions for measurement being easily followed.

The Anemia of the Nephritic Patient, like that of any organic disease or constitutional infection, is secondary in nature and is caused by, or is dependent upon, the original lesion or infection. There is, however, another element to be considered in this connection, i.e., the influence of an iron-poor milk diet in increasing the degree of anemia from which the patient suffers. It is pretty generally conceded by authorities and clinicians of experience that a bland milk diet is best suited to the needs of the nephritic invalid, as the damaged kidneys are thus spared the irritation which results from the excretion of the products of the metabolic changes of the meat proteids, etc. It is well known, however, that milk contains but an infinitesimal proportion of iron and the patient who subsists entirely upon this fluid for any length of time, is deprived of the food-iron that is normally supplied to the blood to maintain its hematin and hemoglobin. This deficiency can be readily made good by administering peptomangan (Gude) both during and after the milk diet period. This palatable, organic, ferruginous compound is entirely free from irritant action upon the kidney and it does not disturb the digestion or cause constipation. The essential iron is supplied in tolerable and promptly assimilable form and the use of the remedy does not, in any way, interfere with such other treatment as the physician may see fit to adopt.

The Hay-Fever Problem.—Again the physician is called upon to grapple with hay-fever, and a veritable army of sneezing, watery-eyed "miserables" come to him for relief. For a long time the idea was prevalent that little or nothing could be done for these people. The patient dreaded the coming of the disease, and the physician dreaded the coming of the patient. The situation was one of ample misgivings and scanty faith. Now it is pretty well recognized that medication, while still empiric to a certain extent, is nevertheless effective. The symptoms can be controlled or greatly minimized, and the patient may have the relief he seeks. And for this much he will be truly thankful, and the physician, in turn, duly thanked. Adrenalin is perhaps the most effective agent. It antagonizes the symptoms and secures to the patient a marked degree of comfort. It allays the congestion of the mucous membrane, reduces the swelling of the turbinal tissues, controls the nasal discharge, cuts short the violent paroxysms of sneezing and the abundant lacrimation, and prevents depression by stimulating the heart. The practitioner who desires to employ adrenalin in the treatment of hay-fever has recourse to the product in a number of forms. Adrenalin chloride solution (1:1000) is doubtless the most widely used. It is first diluted with four to five times its volume of physiological salt solution, then sprayed into the nares and pharynx. Adrenalin inhalant has many adherents. This is an oil solution, and is administered by spray. It may be diluted with olive oil—the inhalant one part, olive oil three to four parts. A third preparation is adrenalin ointment (1 : 1000), which is effective either alone or in supplementing solution adrenalin chloride. Another is adrenalin and chloretone ointment—at once an astringent, antiseptic and mild anesthetic. The latest is anesthone cream (adrenalin chloride 1:20,000, para-amidoethyl-benzoate 10 per cent, in a bland oil base), an astringent, anesthetic ointment. The ointments and cream are supplied in collapsible tubes with elongated nozzle, which facilitates their application to the nasal mucosa. Literature on any or all of the products above mentioned may be had upon application to the manufacturers, Messrs. Parke, Davis & Co., at their general offices in Detroit or any of their numerous branch houses. The company, by the way, issues an attractive brochure on the subject of hay-fever.

A very dependable prescription in respiratory disorders, both of acute and chronic forms, is the Tilden Company's respirazone.

Proper Elimination.—"Just as 'nothing succeeds like success,' so nothing promotes health like healthy conditions. Given a start in the right direction and the human body has remarkable powers of recuperation. The ability of prunoids to establish proper and thorough elimination—to give nature a chance, as it were—accounts, therefore, for the pronounced benefits that invariably follow their administration."

Dr. Vance May, of Cornettsville, Ind., in treating a case of saccharine diabetes of long standing in which he found a good deal of albumen present, as a result of an old gonorrheal inflammation, says the use of a few bottles of sanmetto so cleared up the urine that he could find no strings of mucus, nor the least trace of albumen by heat or nitric acid test. It also afforded a world of relief to his patient who had been suffering for years with his bladder.

Therapeutic Sermonette (by Dr. Geo. F. Butler).—At the onset of acute tonsilitis the bowels should be cleansed by calomel, podophyllin and bilein, followed by saline laxative. Defervescent compound (No. 1 or 2, according to age), every half hour until the temperature reaches 100 degrees F. or less. If much hoarseness and soreness of throat, potassium bichromate gr. 1-67 in a teaspoonful of water should be given every two hours. As the acute symptoms subside these remedies should be replaced by calx iodata (Calcidin) gr. 1-3, given in a teaspoonful of hot water every hour or two, as indicated. The throat should be sprayed three or four times a day with an antiseptic solution (Menthol compound, Abbott, 1 tablet, glycerin ½ ounce, water 12 ounces). The urine should be frequently examined, and if there is evidence of acidemia sodoxylin and salithia should be given in plenty of water until the condition is overcome. A light diet should be given and the child kept in a room moistened with steam or the air medicated with a vapor of cresoline or with antiseptic oils. By all means keep up free elimination through bowels, skin and kidneys.—Therapeutic Medicine.

Should Medical Journals Be Used in a General Advertising Campaign?—A prominent physician recently stated that he read more carefully, and was influenced to a greater extent, by the advertisment appearing in the medical journals, than by any advertising of any other kind. It is not strange that this is so. The physician subscribes to other than medical journals merely for recreation or to keep informed on other than medical topics. The advertising in these general magazines does not appeal to him from a professional standpoint, as it does when he reads the journal of his chosen calling. It is true that the general mediums to which he subscribes are, as a rule, open to all in his reception room; but the patients are seldom in a state of mind or body to profit by the reading of advertising matter. The doctor's advice and recommendation is what the patients are seeking. Many advertisers hesitate to use medical journals, thinking they can secure the doctors' patronage and influence outside of the regular medical press. They are of the impression that their proposition will not appeal to the physician from a professional standpoint. We have already shown the doctor can be reached more quickly and effectively through his favorite medical journal. The question of copy is the important factor to consider. Almost without exception general advertisers can adapt their copy to the medical journal. Some care and attention is necessary but the result so far exceed the trouble and expense involved that it is well worth careful consideration. Physicians are, in most cases, discriminating and liberal purchasers of advertised articles, not only for their own use; for they, by the nature of their calling, advise, recommend and buy for their patients. The result of advertising in medical journals is therefore both direct and indirect. The physician is a tremendous influence in home life, where he is consulted on all matters pertaining to every day life, and his co-operation is worth seeking.

MEDICAL SOCIETY CALENDAR.

Colorado State Medical Society, Colorado Springs, October 11.
Idaho State Medical Association, Boise, October 6-7.
Indiana State Medical Association, Fort Wayne, September 29-30.
Kentucky State Medical Association, Lexington, October.
Medical Association of the Southwest, Witchita, Kas., October 11-12.
Medical Society of the Missouri Valley, Council Bluffs, Ia., Sept. 1 and 2.
Michigan State Medical Society, Bay City, September 28-29.
Minnesota State Medical Association, Minneapolis, October 6-7.
Mississippi Valley Medical Association, Detroit, Mich., September 13-15.
Nevada State Medical Association, Lake Tahoe, Cal., September.
South Dakota State Medical Association, Hot Springs, October.
Utah State Medical Association, Salt Lake City, September.
Wyoming State Medical Society, Casper, September 27.